

## ABSTRACT

A transmission including an input cog assembly mounted to an input shaft and an output cog assembly mounted to an output shaft. The input and output cog assemblies include a plurality of varying diameter input and output cogs, respectively, arranged sequentially. A chain links a pair of input and output cogs for transmitting power from the input cog assembly to the output cog assembly. The chain, in operation, has a high-tension side and a low-tension side. A derailleur is engageable with the low-tension side of the chain to laterally urge the chain from a current output cog to a destination output cog. The input and output cog assemblies are disposed in close proximity to each other and in a complementary arrangement relative to each other with the plurality of input cogs substantially aligned with the plurality of output cogs in a paired arrangement such that in operation the high-tension side of the chain automatically shifts to the input cog directly opposite the destination output cog after the derailleur laterally displaces the chain from the current output cog to the destination output cog.